**IT Applications Unit 3, AOS 2, Organisations and Data Management**

**Database Design Tools, p 106**

**Naming Conventions**

**1** List the naming conventions that can be applied to a database.

tbl, cus, qry, frm, rpt.

**Entity-Relationship Diagram, (ERD)**

1. Describe the nature of these diagrams.

A entity – relationship diagram or ERD is used by database designers to establish the interrelationships between different data elements.

1. Draw the symbols used to represent, entities, relationships and attributes.

Box to represent entites.

Diamonds to represent relationships.

Ovals to represent attributes of entityes.

1. List the three steps to create an ERD.

Firstly identify the entities, then define the relationships and finally add the attributes to each entity.

**Data Structure Table**

1. draw a diagram of the data structure table which is used to design a new database.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Field | Data type | Field size | Input mask | Caption | Description | Validation rule | Validation text |
| cliClientID | Text | 4 |  | Client ID No. | Client’s individual assigned code | Between 1000 and 9999 | Client ID number must be between 1000 and 9999 |
| cliLastName | Text | 30 |  | Last name | Client’s last name |  |  |
| cliFirstName | Text | 30 |  | First name | Client’s first name |  |  |
| cliAddress | Text | 60 |  | Address | Client’s street address |  |  |
| cliSuburb | Text | 20 |  | Suburb | Clients suburb |  |  |
| cliPhone | Text | 20 | (99)9999 9999 | Telephone No. | Client’s phone number |  |  |

1. Note: database tables cannot hold formulas.

**Data Structure diagram**

1 What is the purpose of this diagram?

The purpose of the data structure diagram is to indicate the relationships that exist between the specific tables of the planned database so that the developer will know how the tables ought to be linked.

**Query Design**

1. what is a query?

Queries are used in databases to filter out only those records that meet the query criteria.

1. Distinguish between a primary and a secondary sort

Primary sort is the primary key in this table and secondary sort is the second sort field in this table.

1. Read the query criteria that can be used, including symbols, plain text, \*? Wildcards, etc.

The query criteria can use <,>,=,<=,>=,and<>symbols when dealing with numbers or text.

**Layout diagram**

1. What does a layout diagram involve?

Layout diagram involves sketching what an input form or the output of the solution will look like.

1. List what is contained on a layout diagram.

The layout is based on appropriate use of formats and conventions. The layout diagram is annotated to show formatting details for all elements, including font type, size and style and options for selection lists. Any formulas to be added to a form layout diagrams are usually done by hand, although pre – printed “templates” can be used for some common elements or structures

**Test Data**

1. When is a set of test data prepared?

A set of test data is prepared in the design stage that will be used during development to ensure that the solution is functioning correctly.

1. What is the role of the test data?

The test data should be chosen to test all aspects of the solution, including identification shown to be functioning correctly, the test data is removed and the “real” data relevant to the organisation is added.

**Validating data**

1. List the available electronic validation checks in the software.

Validation rule, input mask, list tool.

1. What is an input mask?

An input mask can also be used to reduce the chance that invalid data type data and controls how the data can be entered. An Input mask can be st for any field that holds text or data type data and controls how the data can be entreed.